

Agronomic studies of *Plectranthus zeylanicus* Benth. (Iriveriya)

R M Dharmadasa* and L S R Arambewela

Natural Product Development Group, Industrial Technology Institute, 363, Bauddhaloka Mawatha, Colombo 7

Plectranthus zeylanicus Benth. (Family Labiatae) is one of the most important medicinal herbs used in Ayurvedic medicine for the treatment of fever, dysentery, diarrhoea, vomiting, and thirst acute and chronic congestion of the liver. Currently, standard protocol is not available for the commercial cultivation of Irriveriya. Therefore, aim of the present study was to find out a suitable protocol for its commercial cultivation. Mature stem cuttings with 2-3 nodes (6 cm long) were prepared from 4 months old mother plants and they were planted in four different spacings (60x60, 60x45, 60x30, 60x15 cm) under 60% shade and light conditions with one stem cutting per hole. Randomised Complete Block Design (RCBD) was used and each treatment was replicated 4 times. Plant height, spreading, shoot number and score were significantly higher in plants grown under 60% shade condition compared to that of light condition. Plant height was significantly higher in 60x30 cm spacing (64.45cm) and followed by 60x15 cm (61.14 cm). Plant spreading in 60% shade and light condition was also significantly higher. Shoot number was significantly different in 60x45 cm spacing (8.17 cm) compared to other spacings. Higher growth score was observed in 60x30 cm spacing. The plants were uprooted and fresh and dry weight was measured. Plant fresh and dry weight cultivated in shade and light conditions found that shade conditions were superior to the open conditions for the cultivation of Iriveriya. The highest fresh weight was observed 60x30 cm spacing (9.96 kg/plot) followed by 60x45 cm (7.10 kg/plot), 60x60 cm spacing (6.35 kg/plot), 60x15 cm (6.42 kg/plot) under 60% shade condition. In light conditions values were 5.07, 3.05, 3.03 and 2.87 kg/plot in 60x30, 60x60, 60x15, and 60x45 cm respectively. Plant dry weight too was significantly higher in spacing 60x30 cm (2 kg/plot) under shade condition compared to the open conditions (0.89 kg/plot). Therefore, it is concluded that Iriveriya could be successfully cultivated in shade conditions. Moreover 60x30 cm spacing could be recommended for commercial cultivation of Iriveriya.

* dharmad@iti.lk